IMAGE FORMING APPARATUS FOR FORMING IMAGE REPRESENTED BY IMAGE DATA ON RECORDING PAPER SHEET

INCORPORATION BY REFERENCE

[0001] This application claims priority to Japanese Patent Application No. 2019-044008 filed on Mar. 11, 2019, the entire contents of which are incorporated by reference herein.

BACKGROUND

[0002] The present disclosure relates to a technique for processing an image of an original document, without making any change to the original document itself, to create a new document image.

[0003] In the presence of a printed paper document formed of a plurality of pages, a user may want to know where in the document a keyword is described. For example, there is an image forming apparatus that acquires a result of recognition of characters from an image of an original document and the locations of the characters within the original document, searches the character recognition result for a character string hit by an input search word, and makes, on the original document, overwrite printing for coloring the location of the character string hit by the search within the original document.

SUMMARY

[0004] A technique improved over the aforementioned technique is proposed as one aspect of the present disclosure.

[0005] An image forming apparatus according to an aspect of the present disclosure includes an image reading device, an original document image storage device, and a control device. The image reading device reads an image of an original document. The original document image storage device stores the image of the original document read by the image reading device. The control device includes a processor and functions, through the processor executing a control program, as a text extractor, an acquirer, a searcher, an identifier, and an image data generator. The text extractor analyses the image of the original document stored in the original document image storage device and extracts a text in the original document and location information on the text in association with each other. The acquirer acquires correspondence information in which a predetermined keyword and a predetermined piece of specification information specifying a mode of presentation in a location of the keyword are associated with each other. The searcher searches the text in the original document extracted by the text extractor for a target term matching the keyword of the correspondence information acquired by the acquirer. The identifier identifies the target term for which the searcher has searched, and also identifies a location of the target term within the image of the original document from the location information on the text extracted by the text extractor. The image data generator generates image data in which an image presented in the mode of presentation specified by the piece of specification information in the correspondence information acquired by the acquirer is synthesized on the location of the target term identified by the identifier and being within the image of the original document stored in the original document image storage device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. **1** is a perspective view showing an image forming apparatus according to a first embodiment of the present disclosure.

[0007] FIG. **2** is a block diagram showing the configuration of the image forming apparatus according to the first embodiment.

[0008] FIG. **3** is a diagram conceptually showing processing for generating image data executed on the image forming apparatus according to the first embodiment, wherein in the image data the location of a target term within image data of an original document is highlighted.

[0009] FIG. **4**A is a view showing an example of a display screen on a display device of the image forming apparatus.

[0010] FIG. **4**B shows an example of correspondence information printed on a CSV document.

[0011] FIG. **4**C shows an example of a correspondence information storage table.

[0012] FIG. **5** is a flowchart showing an example of document highlighting processing according to the first embodiment.

[0013] FIG. **6** is a diagram conceptually showing processing for searching original document text data, identifying target terms matching keywords specified by CSV document data, and highlighting the locations of the target terms within the image data of the original document in a mode of presentation specified by the CSV document.

[0014] FIG. **7** is a diagram showing an exemplary case where the location of a target term within the image data of the original document is identified and the location is then highlighted in a mode of presentation specified by the CSV document.

[0015] FIG. **8** is a block diagram showing the configuration of an image forming apparatus according to a second embodiment.

[0016] FIG. **9** is a diagram conceptually showing highlighting processing in the second embodiment.

[0017] FIG. **10**A shows an example of correspondence information printed on a CSV document in the second embodiment.

[0018] FIG. **10**B shows an example of image data in which an image of a replacement term specified by the CSV document is synthesized on the location of a target term within image data of an original document.

[0019] FIG. **11** is a flowchart showing an example of document highlighting processing according to the second embodiment.

[0020] FIG. **12** is a block diagram showing the configuration of an image forming apparatus according to a third embodiment.

[0021] FIG. **13** is a diagram conceptually showing highlighting processing in the third embodiment.

[0022] FIG. **14**A shows an example of a correspondence information storage table in the third embodiment.

[0023] FIG. **14**B shows an example of image data in which an image of a term in a font specified by the CSV document is synthesized on the location of a target term within image data of an original document.

[0024] FIG. **15** is a flowchart showing an example of document highlighting processing according to the third embodiment.